

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

Claim 1 (Amended): An isolated nucleic acid encoding an *M. catarrhalis* polypeptide of SEQ ID NO:3218 SEQ ID NOS: 1921 [-] 3840.

Claim 2 (Original): A recombinant expression vector comprising the nucleic acid of Claim 1 operably linked to a transcription regulatory element.

Claim 3 (Original): A cell comprising a recombinant expression vector of Claim 2.

Claim 4 (Original): A method for producing an *M. catarrhalis* polypeptide comprising culturing a cell of Claim 3 under conditions that permit expression of the polypeptide.

Claim 5 (Amended): An isolated nucleic acid selected from the group consisting of:

- (a) SEQ ID NO:1298 SEQ ID NOS: 1 [-] 1920;
- (b) a complement of SEQ ID NO:1298 SEQ ID NOS: 1 [-] 1920; or
- (c) an RNA of (a) or (b), wherein U is substituted for T.

Claim 6 (Original): A recombinant expression vector comprising the nucleic acid of Claim 5 operably linked to a transcription regulatory element.

Claim 7 (Original): A cell comprising a recombinant expression vector of Claim 6.

Claim 8 (Original): A method for producing an *M. catarrhalis* polypeptide comprising culturing a cell of Claim 7 under conditions that permit expression of the polypeptide.

Claim 9 (Amended): A probe comprising a nucleotide sequence consisting of at least eight contiguous nucleotides of a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:1298 SEQ ID NOS: 1 [-] 1920;
- (b) a complement of SEQ ID NO:1298 SEQ ID NOS: 1 [-] 1920; or
- (c) an RNA of (a) or (b), wherein U is substituted for T.

Claim 10 (Amended): An isolated nucleic acid comprising a nucleotide sequence of at least eight nucleotides in length, wherein the sequence is hybridizable to a nucleic acid having a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NO:1298 SEQ ID NOS: 1 [-] 1920;
- (b) a complement of SEQ ID NO:1298 SEQ ID NOS: 1 [-] 1920; or
- (c) an RNA of (a) or (b), wherein U is substituted for T..

Claim 11 (Withdrawn): A vaccine composition for prevention or treatment of an *M. catarrhalis* infection comprising a nucleic acid of Claim 5 and a pharmaceutically acceptable carrier.

Claim 12 (Withdrawn): A vaccine composition of Claim 11, further comprising an adjuvant.

Claim 13 (Withdrawn): A vaccine composition of Claim 11, further comprising one or more additional ingredients.

Claim 14 (Withdrawn): A method of treating a subject for *M. catarrhalis* infection comprising administering to a subject a vaccine composition of Claim 11, such that treatment of *M. catarrhalis* infection occurs.

Claim 15 (Withdrawn): A method of Claim 14, wherein the treatment is a prophylactic treatment.

Claim 16 (Withdrawn): A method of Claim 14, wherein the treatment is a therapeutic treatment.

Claim 17 (Withdrawn): A recombinant or substantially pure preparation of an *M. catarrhalis* polypeptide or a fragment thereof, wherein said *M. catarrhalis* polypeptide is SEQ ID NOS: 1921-3840.

Claim 18 (Withdrawn): A vaccine composition for prevention or treatment of an *M. catarrhalis* infection comprising an *M. catarrhalis* polypeptide of Claim 17 and a pharmaceutically acceptable carrier.

Claim 19 (Withdrawn): A vaccine composition of Claim 18, further comprising an adjuvant.

Claim 20 (Withdrawn): A vaccine composition of Claim 18, further comprising one or more additional ingredients.

Claim 21 (Withdrawn): A method of treating a subject for *M. catarrhalis* infection comprising administering to a subject a vaccine composition of Claim 18, such that treatment of *M. catarrhalis* infection occurs.

Claim 22 (Withdrawn): A method of Claim 21, wherein the treatment is a prophylactic treatment.

Claim 23 (Withdrawn): A method of Claim 21, wherein the treatment is a therapeutic treatment.

Claim 24 (Withdrawn): A method for detecting the presence or absence of a *Klebsiella* nucleic acid in a sample comprising:

- (a) contacting a sample with the nucleic acid of Claim 5 under conditions in which a hybrid can form between a probe comprising a nucleotide sequence consisting of at least eight contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1-2501 or a complement of SEQ ID NOS: 1-1920 and a *Klebsiella* nucleic acid in the sample; and
- (b) detecting the hybrid formed in step (a), wherein detection of a hybrid indicates the presence or absence of a *Klebsiella* nucleic acid in the sample.

Claim 25 (Withdrawn): A computer readable medium having recorded thereon a nucleotide sequence selected from the group consisting of:

- (a) SEQ ID NOS: 1-1920;
- (b) a complement of SEQ ID NOS: 1- 1920;
- (c) an RNA of (a) or (b), wherein U is substituted for T; or
- (d) a fragment of (a), (b) or (c).

Claim 26 (Withdrawn): A computer based system for identifying fragments of the *Klebsiella* genome of comprising;

- a) a data storage means comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1-1920, a complement of SEQ ID NOS: 1-1920, or a fragment thereof,
- b) a search means for comparing a target sequence to the nucleotide sequences of the data storage means of step (a) to identify homologous sequences, and;
- c) a retrieval means for obtaining said homologous sequences(s) of step (b).

Claim 27 (Withdrawn): A method of identifying nucleic acid fragments of a *Klebsiella* genome comprising comparing a database comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1-1920; a complement of SEQ ID NOS: 1-1920; or a fragment thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence is not randomly selected.

Claim 28 (Withdrawn): A method for identifying an expression modulating fragment of the *Klebsiella* genome comprising comparing a database comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1- 1920; a complement of SEQ ID NOS: 1-1920; or fragment thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence comprises sequences known to regulate gene expression.